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**For new designs refer to RT series.**

## Jameco Part Number 215909 (RKA-7DZ-12)

# RKA series

## 5 To 10 Amp PC Board Miniature Relay

Meets VDE 8mm spacing, 5kV dielectric

- File E22575
- File LR35579
- File Nos. 1661 & 1662

### Features

- DC coils – SPST and DPDT contact arrangements.
- Immersion cleanable§, tape sealed case.
- Meets VDE 8mm spacing, 4kV dielectric, coil to contacts.
- Contacts rated up to 10A, resistive and TV-5 (5A Tungsten).

§ For more details, refer to application note 13C265, "Mounting, Termination and Cleaning of PC Board Relays."

### Contact Data @ 25°C

**Arrangements:** 1 Form A (SPST-NO), 1 Form C (SPDT), 2 Form A (DPST-NO) and 2 Form C (DPDT).
**Materials:** Silver-cadmium oxide and silver-nickel alloy.
**Expected Mechanical Life:** 5 million operations.

**Contact Ratings @ 25°C with relay properly vented. Remove tape over vent hole after soldering and cleaning.**

| Code | Arrangement* | Material | UL/CSA Ratings & Typical Life |
|---|---|---|---|
| G | SPST-NO or SPDT (diagram 1) | Silver-nickel alloy | 10 amps, resistive @ 24VDC or 240VAC<br>100,000 operations<br>1/3 HP @ 120/240VAC<br>14 amps maximum carry current<br>150VDC maximum switched voltage |
| T (TV-5) | SPST-NO (diagram 1) | Silver-cadmium oxide | 10 amps, resistive @ 24VDC or 240VAC<br>100,000 operations<br>TV-5<br>1/3 HP @ 120/240VAC<br>78 amp inrush @ 120VAC lamp load |
| Z | DPST-NO or DPDT (diagram 2) | Silver-nickel alloy | 5 amps, resistive @ 24VDC or 240VAC<br>50,000 operations<br>1/8 HP @ 120/240VAC<br>7 amps maximum carry current<br>150VDC maximum switched voltage |
| T (TV-3) | DPST-NO (diagram 2) | Silver-cadmium oxide | 5 amps, resistive @ 24VDC or 240VAC<br>100,000 operations<br>TV-3<br>1/8 HP @ 120/240VAC<br>51 amp inrush @ 120VAC lamp load |

* Diagram numbers noted refer to the Wiring Diagrams and PC Board Layouts shown on the following page.

### Initial Dielectric Strength

**Between Open Contacts:** 1,000V rms.
**Between Adjacent Contacts:** 2,500V rms.
**Between Contacts and Coil:** 5,000V rms.

### Coil Data @ 25°C

**Voltage:** 3 to 110VDC.
**Maximum Power @ 25°C:** 1.4W.
**Temperature Rise:** 55°C per Watt.
**Maximum Temperature Per UL508:** Class B insulation.
**Duty Cycle:** Continuous.
**Initial Insulation Resistance:** 1,000 megohms, min., at 25°C, 500VDC and 50% rel. humidity.

**Coil Data @ 25°C**

| Contact Codes Z & G | | | | |
|---|---|---|---|---|
| **Nominal DC Voltage** | **Resistance in Ohms ±10%** | **Must Operate DC Voltage** | **Maximum DC Voltage** | **Must Operate Power in mW** |
| 3 | 17 | 2.1 | 4.6 | 259 |
| 5 | 47 | 3.5 | 7.7 | 261 |
| 6 | 68 | 4.2 | 9.3 | 259 |
| 9 | 155 | 6.3 | 13.9 | 256 |
| 12 | 270 | 8.4 | 18.5 | 261 |
| 18 | 610 | 12.6 | 27.0 | 260 |
| 24 | 1,100 | 16.8 | 37.1 | 257 |
| 48 | 4,400 | 33.6 | 74.2 | 257 |
| 60 | 6,800 | 42.0 | 92.0 | 259 |
| *110 | 22,000 | 77.0 | 169.0 | 270 |
| **Contact Code T** | | | | |
| **Nominal DC Voltage** | **Resistance in Ohms ±10%** | **Must Operate DC Voltage** | **Maximum DC Voltage** | **Must Operate Power in mW** |
| 3 | 12.5 | 2.1 | 4.2 | 353 |
| 5 | 36 | 3.5 | 7.0 | 340 |
| 6 | 50 | 4.2 | 8.4 | 353 |
| 9 | 115 | 6.3 | 12.6 | 345 |
| 12 | 200 | 8.4 | 16.8 | 353 |
| 18 | 460 | 12.6 | 25.0 | 345 |
| 24 | 820 | 16.8 | 33.6 | 344 |
| 48 | 3,300 | 33.6 | 67.2 | 342 |
| 60 | 5,100 | 42.0 | 84.0 | 346 |
| *110 | 16,800 | 77.0 | 154.0 | 353 |

*100-110VDC units not marked with VDE logo.

### Operate Data @ 25°C

**Must Operate Voltage:** 70% of nom. voltage or less.
**Operate Time (Excluding Bounce):** 15 ms, typ., at nom. voltage.
**Release Time (Excluding Bounce):** 5 ms, typ., at nom. voltage.

### Environmental Data

**Temperature Range:** **Storage:** -40°C to +105°C.
**Operating:** -40°C to +65°C.

### Mechanical Data

**Termination:** Printed circuit terminals. Sockets are available. (See RKS data.)
**Enclosure:** Immersion cleanable, tape-sealed model.
**Weight:** 0.65 oz. (18.5g) approximately.

## Ordering Information

| Typical Part Number ▶ | RK | A | -5 | D | G | -06 |
|---|---|---|---|---|---|---|

**1. Basic Series:**
RK = Miniature, printed circuit board relay.

**2. Enclosure:**
A = Immersion cleanable, plastic tape-sealed case.

**3. Contact Arrangement:**
1 = 1 Form A (SPST-NO) 7 = 2 Form A (DPST-NO)
5 = 1 Form C (SPDT) 11 = 2 Form C (DPDT)

**4. Coil Input:**
D = DC voltage.

**5. Contact Type & Wiring / PC Board Layout Diagram Codes:**
**Single Pole Relays:**
G = 10 amp contacts, diagram code 1, SPST-NO or SPDT.
T = TV-5 rated, 10 amp contacts, diagram code 1, SPST-NO only.
**Double Pole Relays:**
Z = 5 amp contacts, diagram code 2, DPST-NO or DPDT.
T = TV-3 rated, 5 amp contacts, diagram code 2, DPST-NO only.
**Note:** See diagrams below.

**6. Coil Voltage:**

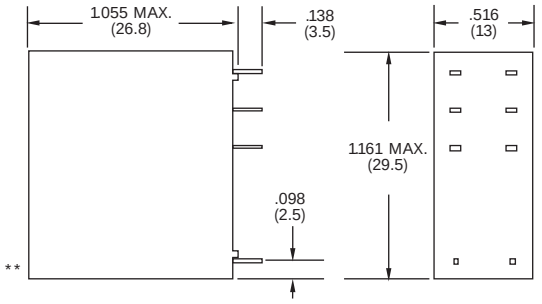
| | | | | | |
|---|---|---|---|---|---|
| 03 = 3VDC | 06 = 6VDC | 12 = 12VDC | 18 = 18VDC | 48 = 48VDC | 110 = 110VDC |
| 05 = 5VDC | 09 = 9VDC | 15 = 15VDC | 24 = 24VDC | 60 = 60VDC | |

## For new designs refer to RT series.

### Stock Items – The following items are normally maintained in stock for immediate delivery.

| | | |
|---|---|---|
| RKA-1DG-05 | RKA-5DG-48 | RKA-11DZ-06 |
| RKA-1DG-24 | RKA-7DT-24 | RKA-11DZ-09 |
| RKA-5DG-06 | RKA-7DZ-12 | RKA-11DZ-12 |
| RKA-5DG-12 | RKA-7DZ-24 | RKA-11DZ-24 |
| RKA-5DG-24 | RKA-11DZ-05 | RKA-11DZ-48 |

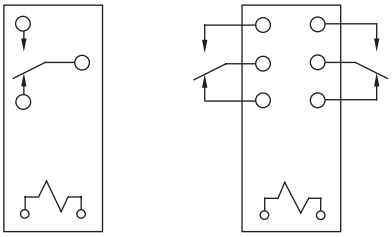
### Outline Dimensions




** Recommended tape tab be punctured or removed before relay is put in service.

### Wiring Diagrams (Bottom Views)

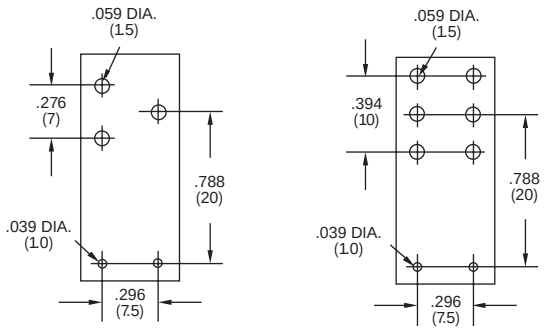
**Code 1** **Code 2**



**Note:** On single throw models, only necessary terminals are present.

### PC Board Layouts (Bottom Views)

**Code 1** **Code 2**




**Note:** On single throw models only necessary terminals are present.

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